

## Claims

1. A method for producing a semiconductor device characterized by having a step of forming wiring using first solution ejection means for ejecting a conductive material, a step of forming a resist mask on the wiring using second solution ejection means, and a step of etching the wiring using an atmospheric-pressure plasma device having linear plasma generation means using the resist mask as a mask.

2. A method for producing a semiconductor device characterized by having a step of forming wiring using solution ejection means for ejecting a conductive material, a step of forming a resist mask at least on the wiring, and a step of etching the wiring using an atmospheric-pressure plasma device having linear plasma generation means using the resist mask as a mask.

3. A method for producing a semiconductor device characterized by having a step of forming wiring, a step of forming a resist mask at least on the wiring using solution ejection means, and a step of etching the wiring using an atmospheric-pressure plasma device having linear plasma generation means using the resist mask as a mask.

4. The method for producing the semiconductor device in any one of claim 1 to claim 3, characterized in that the solution ejection means has one or more of solution ejection ports.

5. The method for producing the semiconductor device in any one of claim 1 to claim 3, characterized in that when a wiring material, or a resist, or the like is ejected using the solution ejection means, a substrate is heated.

6. The method for producing the semiconductor device in any one of claim 1 to claim 3, characterized in that the etching and/or ashing are/is processed at the atmospheric pressure or near-atmospheric pressure.

5           7. A method for producing a display device using a semiconductor device characterized by having a step of forming wiring using first solution ejection means for ejecting a conductive material, a step of forming a resist mask on the wiring using second solution ejection means, and a step of etching the wiring using an atmospheric-pressure plasma device having linear plasma generation means using the resist mask as a mask.

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8. A method for producing a display device using a semiconductor device characterized by having a step of forming wiring using solution ejection means for ejecting a conductive material, a step of forming a resist mask at least on the wiring, and a step of etching the wiring using an atmospheric-pressure plasma device having linear  
15 plasma generation means using the resist mask as a mask.

9. A method for producing a display device using a semiconductor device characterized by having a step of forming wiring, a step of forming a resist mask at least on the wiring using solution ejection means, and a step of etching the wiring using an  
20 atmospheric-pressure plasma device having linear plasma generation means using the resist mask as a mask.

10. The method for producing the display device using the semiconductor device in any one of claim 7 to claim 9, characterized in that the solution ejection means has one  
25 or more of solution ejection ports.

11. The method for producing the display device using the semiconductor device in any one of claim 7 to claim 9, characterized in that when a solution is ejected using the solution ejection means, a substrate is heated.

5           12. The method for producing the display device using the semiconductor device in any one of claim 7 to claim 8, characterized in that the etching and/or the ashing are/is processed at the atmospheric pressure or near-atmospheric pressure.

10           13. A method for producing a semiconductor device characterized by having a step of forming wiring using first solution ejection means for ejecting a conductive material, a step of forming a resist mask on the wiring using second solution ejection means, and a step of etching the wiring using an atmospheric-pressure plasma device having a plurality of linearly-arranged plasma-generation-means using the resist mask as a mask.

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14. A method for producing a semiconductor device characterized by having a step of forming wiring using solution ejection means for ejecting a conductive material, a step of forming a resist mask at least on the wiring, and a step of etching the wiring using an atmospheric-pressure plasma device having a plurality of linearly-arranged  
20 plasma-generation-means using the resist mask as a mask.

15. A method for producing a semiconductor device characterized by having a step of forming wiring, a step of forming a resist mask at least on the wiring using solution ejection means, and a step of etching the wiring using an atmospheric-pressure  
25 plasma device having a plurality of linearly-arranged plasma-generation-means using the resist mask as a mask.

16. The method for producing the semiconductor device in any one of claim 13 to claim 15, characterized in that the solution ejection means has one or more of solution ejection ports.

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17. The method for producing the semiconductor device in any one of claim 13 to claim 15, characterized in that when a wiring material, or a resist, or the like is ejected using the solution ejection means, a substrate is heated.

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18. The method for producing the semiconductor device in any one of claim 13 to claim 15, characterized in that the etching is processed at the atmospheric pressure or near-atmospheric pressure.

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19. A method for producing a display device using a semiconductor device characterized by having a step of forming wiring using first solution ejection means for ejecting a conductive material, a step of forming a resist mask on the wiring using second solution ejection means, and a step of etching the wiring using an atmospheric-pressure plasma device having a plurality of linearly-arranged plasma-generation-means using the resist mask as a mask.

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20. A method for producing a display device using a semiconductor device characterized by having a step of forming wiring using solution ejection means for ejecting a conductive material, a step of forming a resist mask at least on the wiring, and a step of etching the wiring using an atmospheric-pressure plasma device having a plurality of linearly-arranged plasma-generation-means using the resist mask as a mask.

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21. A method for producing a display device using a semiconductor device characterized by having a step of forming wiring, a step of forming a resist mask at least on the wiring using solution ejection means, and a step of etching the wiring using an atmospheric-pressure plasma device having a plurality of linearly-arranged plasma-generation-means using the resist mask as a mask.

22. A method for producing the display device using the semiconductor device in any one of claim 19 to claim 21, characterized in that the solution ejection means has one or more of solution ejection ports.

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23. A method for producing the display device using the semiconductor device in any one of claim 19 to claim 21, characterized in that when a solution is ejected using the solution ejection means, a substrate is heated.

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24. A method for producing the display device using the semiconductor device in any one of claim 19 to claim 21, characterized in that the etching is processed at the atmospheric pressure or near-atmospheric pressure.